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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER	
DEUBLE, MARK A	
ART UNIT	**PAPER NUMBER**
3651	

DATE MAILED: 12/14/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/711,684	LEMM, CHRISTOPH	
	Examiner	Art Unit	
	Mark A. Deuble	3651	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☐ Responsive to communication(s) filed on _____.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-6,8-17,19-25 and 28* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☒ Claim(s) *1-6 and 8-16* is/are allowed.

6)☒ Claim(s) *17,25 and 28* is/are rejected.

7)☒ Claim(s) *19-24* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

1. Claims 17 and 25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lapeyre et al. (U.S. Patent No. 6,148,990) in view of Carpenter (U.S. Patent No. 1,532,228), and further in view of Bonnet (U.S. Patent No. 5,988,356).

Lapeyre et al. shows in Figs. 4-6 a roller-top conveyor belt extending in width laterally from a first side to a second side and traveling in the conveying direction. This conveyor has a plurality of cylindrical rollers 48 mounted on axles 84 extending in the conveying direction so that the rollers having salient portions protruding outward from an outer surface of the belt to support a conveyed article. The rollers are capable of being rotated about their axes to allow an article to be urged toward a first or second side of the conveyor belt.

While Lapeyre et al. does not include a sorting station as required by the present invention, it does suggest that the conveyor belt may advantageously be used to allow articles to be pushed off the side of the conveyor belt with a minimum of friction (col. 1, ln. 29-34). Therefore it would have been obvious to one of ordinary skill in the art at the time of the invention to provide the conveyor of Lapeyre et al. with a sorting station. Carpenter shows such a sorting station which advantageously employs a linear elongate guide 6. The guide extends in length from a first end to a second end above the outer surface of the conveyor to form a

generally vertical wall. The guide is selectively positioned by a drive 8 into a first position traversing the width of the conveyor to intercept a conveyed article and guide it off a first or second side of the belt, a second position not intercepting a conveyed article to allow it to continue to advance in the conveying direction. The drive acts a lift connected to the guide for lifting the guide above the upper surface of the belt into a non-blocking orientation and lowering the guide into a blocking orientation as the guide moves between the first and second positions. When the conveyor of Lapeyre et al. is provided with the diverter of Carpenter it would have all the structure required by claims 17 and 25 except for the sensor required by the added language of claim 17.

However, Bonnet teaches that the operation of a sorting station may advantageously be automated by a programmable logic controller 96 connected to a sensor 98 that senses a predetermined characteristic of a conveyed article such as a bar code or two-dimensional symbol on the article to determine which outbound conveyor the article is to be directed so that the controller may selectively orient an elongated guide to send the article to the appropriate conveyor (col. 6, ln. 24-37). Therefore it would have been obvious to one of ordinary skill in the art at the time of the invention to provide the apparatus of Lapeyre et al. and Carpenter with the sensor arrangement taught by Bonnet. When this is done, the resulting apparatus would have generally all the structure required by claims 17 and 25.

In regard to the limitations of claim 17 that the elongated guide includes roller wheels having low-friction surfaces extending from the wall and rotatable about vertical exes to engage a conveyed article in low-friction rolling contact, it should be noted that Lapeyre et al. teaches that rollers may be used to provide low friction rolling contact with conveyed articles to avoid

damaging the articles as they move relative to the belt. This teaching of the use of rollers is equally applicable to the guide of Carpenter as it is to the belt of Lapeyre et al. and therefore it would have been obvious to one of ordinary skill in the art at the time of the invention to provide rollers on vertical axes on the guide of Carpenter.

2. Claim 28 is rejected under 35 U.S.C. 103(a) as being unpatentable over Lapeyre et al. (U.S. Patent No. 6,148,990) in view of Bonnet (U.S. Patent No. 5,988,356) as in the office action of October 20, 2005.

Lapeyre et al. shows in Figs. 4-6 a roller-top conveyor belt extending in width laterally from a first side to a second side and traveling in the conveying direction. This conveyor has a plurality of cylindrical rollers 48 mounted on axles 84 extending in the conveying direction so that the rollers having salient portions protruding outward from an outer surface of the belt to support a conveyed article. The rollers are capable of being rotated about their axes to allow an article to be urged toward a first or second side of the conveyor belt.

While Lapeyre et al. does not include a sorting station as required by the present invention, it does suggest that the conveyor belt may advantageously be used to allow articles to be pushed off the side of the conveyor belt with a minimum of friction (col. 1, ln. 29-34). Therefore it would have been obvious to one of ordinary skill in the art at the time of the invention to provide the conveyor of Lapeyre et al. with a sorting station. Bonnet shows such a sorting station for diverting articles on a conveyor belt 26 which may advantageously be placed into a variety of positions. The sorting station includes a linear elongate guide formed by a conveyor belt 62 that extends in length from a first end to a second end above the outer surface of the conveyor to form a generally vertical wall. The guide is selectively positioned by a pair of

linear drives 44 and 50 into a variety of positions. These positions would include into a first position traversing the width of the conveyor to intercept a conveyed article and guide it off a first or second side of the belt, a second position not intercepting a conveyed article to allow it to continue to advance in the conveying direction, a third position intercepting a conveyed article and guiding it to an opposite side of the belt from a first position, and a fourth position opposite the second in which the guide does not intercept a conveyed article. Furthermore, in moving between the first and third positions, the guide would move between a first angle oblique to the conveying direction and a second angle mirroring the first angle about the centerline of the belt so that the guide has been rotated about its midpoint. The first linear drive 50 is disposed at a first location defining a lateral track 52 below the conveyor belt transversing the conveyor belt. A first end 48 of the guide is attached to an arm 56 that is selectively driven along the track to move the guide between first and second positions at opposite side of the belt. The second linear drive 44 is disposed at a second location upstream of the first and defining a lateral track 46 below the conveyor belt transversing the conveyor belt. A second end 42 of the guide is attached to an arm 60 that is selectively driven along the track to move the guide between first and second positions at opposite side of the belt. In order to allow the length of the guide to change, it includes an elastic element76 extending from the first end to the second end of the elongated guide. The position of the guide is determined by a controller 96 that receives a signal from a sensor 36 disposed along the conveying line to sense a characteristic of a conveyed article at a position along the conveying line upstream of the sorting station. The controller controls the drives of the guide means to adjust the orientation of the guide member as a function of the

signal associated with a conveyed article. When the conveyor of Lapeyre et al. is provided with the diverter of Bonnet, it would have all the structure required by claim 28.

In regard to the limitation that first and second exit conveyors abut the belt at first and second sides, respectively, for receiving conveyed articles diverted off the first and second sides of the belt, it is recognized that the exit conveyors of Bonnet are not located at the first and second sides of the conveyor belt. However, Lapeyre et al. itself fairly suggests that exit conveyors may be located at the first and second sides of the belt by stating, as was noted above, that the conveyor belt may advantageously be used to allow articles to be pushed off the side of the conveyor belt with a minimum of friction. Therefore, it would have been obvious to one of ordinary skill in the conveyor art move the exit conveyors of Bonnet to the first and second sides of the belt to provide conveyors at the sides of the belt to receive the articles pushed off the side of the belt of Lapeyre et al. in order to carry the articles to their appropriate downstream destinations.

Allowable Subject Matter

2. Claims 1-5 and 8-16 are allowed.

3. Claims 19-24 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

4. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Mark A. Deuble whose telephone number is (571) 272-6912. The examiner can normally be reached on Monday through Friday except for alternate Fridays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Gene O. Crawford can be reached on (571) 272-6911. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

md

MARK A. DEUBLE
PATENT EXAMINER